REPLACEMENT PAGE

(a) TITLE OF INVENTION.

SUBMISSION TO THE UNITED STATES PATENT AND
TRADEMARK OFFICE FOR NONPROVISIONAL UTILITY PATENT
(SMALL ENTITY) FOR RING MUTE FOR BRASS MUSICAL INSTRUMENTS

SUBMITTED BY: MARK M. SHELLHAMMER
E. JANE SHELLHAMMER

DATE: 06/14/03

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(b) CROSS-REFERENCE TO RELATED APPLICATIONS.

Below are the references. No references were originally submitted.

References Cited
U. S. Patent Documents

D69112	DEC., 1925	BUSKEY	84/400
1508024	SEPT., 1924	MCARTHUR	84/400
1644272	OCT., 1927	PINARD	84/400
1741835	DEC., 1929	GANTNER	84/453
2657609	NOV., 1953	STROBACH	84/453
3016782	JAN., 1962	LAAS	84/800
3099183	JULY, 1963	ALLES	84/400
3299764	JAN., 1967	VENTURA	84/400
3760679	SEPT., 1973	GOSSICK, ET AL	84/400
4012983	MARCH, 1977	PLOEGER	84/400
4632003	DEC., 1986	KOPP	84/400

Foreign Patent Documents

374187	APRIL, 1923	DD	84/400

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None

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(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.

Not Applicable

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None

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(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC OR REFERENCE TO A MICROFICHE APPENDIX.

Not Applicable

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None

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(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

The invention of this application (ring mute) relates to brass musical instruments with a brass bell. Particularly, this invention dampens the sound of a brass musical instrument by placing a sound absorbent foam urethane ring onto and around the rim of the bell of a brass musical instrument.

The invention is comprised of a flexible foam urethane ring with an incision .25 inches deep extending the entire inner circumference of the invention. The foam ring is held onto the rim of the bell of the brass musical instrument by placing the rim into an incision located in the inner area of the ring.

According to R. Morley-Pegge, The French Horn (London), 1960, p. 139., there is no record of the first use of the mute for horn, or for that matter any other brass instrument. For the horn, the first usage is said to have been well before 1750.

An early example is found in Buxtehunde Cantata, Ihr lieben Christen, freut euch nuin, which calls for two Clarini in Sordini.

According to Yasir Agha of Jazz Review.com, Joe King Oliver having joined Kid Ory's Brownskin Babies in about 1914 or 1915 was known for developing great expressive skills in the use of mutes.

Mutes for brass musical instruments come in various sizes and shapes. Some examples are found in U.S. Patent Number 5,373,771; U.S. Patent Number 3,760,679; U.S. Patent Number 4,998,959; U.S. Patent Number 1,508,024; U.S. Patent Number 3,299,764; and U.S. Patent Number 3,099,183.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

Other typically utilized mutes that attach to the bell of a brass instrument can be found in U.S. Patent Number 5373771; U.S. Patent Number 3760679; and U.S. Patent Number 4998959. Yet none of these mutes use a foam ring that is placed onto and around the rim of the bell of a brass musical instrument for the sole purpose of dampening the sound.

A mute is a device that softens or muffles the sound of an instrument (Hal Leonard Music Dictionary ISBN 0-7935-1654-4). Heretofore, all mutes either soften or muffle an instrument, yet, the ring mute does not fit into the bell or employ metal clips or fasteners to secure the mute onto the bell of the instrument.

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~~BACKGROUND~~

~~This invention relates to other mutes in that it changes the timbre of a brass musical instrument but with no apparent change in air blow resistance or pitch. The ring mute differs from other preexisting mutes in that the ring mute fits onto and around the rim of the bell of a brass musical instrument expressively causing a smoother, more rounded, smoky sound.~~

~~The reason the ring mute was invented was due to the need for a quieter trumpet. Various mutes were tried in order to deal with this situation but depending on the mute used, the adjustment to the tuning slide to keep the trumpet in tune ranged from moderate tuning slide adjustment to large tuning slide adjustment (and example of large tuning slide adjustment would be the Harmon mute). Being dissatisfied with having to adjust the tuning slide, a urethane foam ring was fashioned to fit onto and around the rim of the bell of a trumpet. Surprisingly not only did the ring dampen the sound, it changed the timbre to a smooth, rounded, smoky, musical expression with no apparent change in air blow resistance or pitch.~~

~~Page Four~~

(f) BRIEF SUMMARY OF THE INVENTION.

The present invention suggests a mute for a brass musical instrument which has a bell. One aspect of the present invention (ring mute), is that it is not comprised of a hollow body like found in U.S. Patent Number 1508024. A further aspect of the present invention is that it does not fit into the throat of the of the brass musical instrument as in U.S. Patent Number 1741835.

A similar aspect to other mutes is that the invention does fit onto the rim of a brass musical instrument yet is not held or reinforced by metal clamps, clips, or wires like those found in U.S. Patent Number 5373771; U.S. Patent Number 3760679; and U.S. Patent Number 4998959.

The present invention provides a benefit by dampening the sound of the brass musical instrument by placing a flexible foam urethane ring onto and around the rim of the bell of the brass musical instrument. The ring is held onto the rim of the bell of the brass musical instrument by placing the rim of the bell of the brass musical instrument inside an incision .25 inches deep that encircles the entire inner area of the foam ring.

Another advantage of the present invention is that since there is no hollow body type mute as with U.S. Patent 1508024, the sound of a hollow body mute is not heard.

Other benefits and advantages of the present invention will become apparent to those skilled in following the descriptive application of the invention.

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~~SUMMARY OF THE INVENTION~~

~~It is therefore the object of the present invention (ring mute) to provide a means for new musical expressivity by way of a mute that has no apparent air blow resistance or pitch change. This does not exist in current day mutes.~~

~~To accomplish the objective a ring of flexible, sound absorbent, urethane foam 1.25 inches x .625 inches in diameter is utilized. On the outer side of the ring of the flexible, sound absorbent, urethane foam a non-porous adhesive plastic strip is used with the adhesive side against the ring to reinforce the foam and to assist in creating a fit onto and around the rim of the bell of the brass musical instrument. On the inside area of the ring of flexible, sound absorbent, urethane foam a scalpel incision .25 inches deep is cut completely into and around the inner middle of the ring.~~

~~This allows the rim of the bell of the brass musical instrument to fit inside the flexible, sound absorbent, urethane foam. The circumference of the ring mute will vary depending on the type of brass musical instrument used. The photographs provided under DESCRIPTION uses a B flat trumpet as a means to more easily describe the invention. The **ring mute** can be used for any brass musical instrument as a means to expand musical expressivity.~~

~~Page Eight~~

REPLACEMENT SHEET

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

FIGURE ONE
RING MUTE FROM VARIOUS ANGLES

A) Horizontal View of the Mute

1. Opening
2. Flexible Foam Urethane Ring .625 Inches Thick
3. 1 Inch Wide Adhesive Tape Strip 9 Mils Thick, Attached to the Outer Section of the 1.25 Inch Wide Urethane Foam Ring
4. Inner Area of the Ring Mute Showing the .25 Inch Deep Incision

B) Front View of Mute

1. Opening
2. Flexible Foam Urethane Ring .625 Inches Thick
3. 1 Inch Wide Adhesive Tape Strip 9 Mils Thick, Attached to the Outer Section of the 1.25 Inch Wide Urethane Foam Ring
4. Inner Area of the Ring Mute Showing the .25 Inch Deep Incision

C) Vertical View of the Mute

1. Opening
2. Flexible Foam Urethane Ring .625 Inches Thick
3. 1 Inch Wide Adhesive Tape Strip 9 Mils Thick, Attached to the Outer Section of the 1.25 Inch Wide Urethane Foam Ring
4. Inner Area of the Ring Mute Showing the .25 Inch Deep Incision

FIGURE TWO

Horizontal View of the Mute

1. Opening
2. Flexible Foam Urethane Ring .625 Inches Thick
3. 1 Inch Wide Adhesive Tape Strip 9 Mils Thick, Attached to the Outer Section of the 1.25 Inch Wide Urethane Foam Ring
4. Inner Area of the Ring Mute Showing the .25 Inch Deep Incision

FIGURE THREE

Front View of Mute

1. Opening
2. Flexible Foam Urethane Ring .625 Inches Thick
3. 1 Inch Wide Adhesive Tape Strip 9 Mils Thick, Attached to the Outer Section of the 1.25 Inch Wide Urethane Foam Ring
4. Inner Area of the Ring Mute Showing the .25 Inch Deep Incision

FIGURE FOUR

Vertical View of the Mute

1. Opening
2. Flexible Foam Urethane Ring .625 Inches Thick
3. 1 Inch Wide Adhesive Tape Strip 9 Mils Thick, Attached to the Outer Section of the 1.25 Inch Wide Urethane Foam Ring
4. Inner Area of the Ring Mute Showing the .25 Inch Deep Incision

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~~BRIEF DESCRIPTION OF THE DRAWINGS (DIGITAL PHOTOGRAPHS).~~

~~FIG. 1 is an example of a vintage Martin Company Committee Trumpet Circa 1940 to 1950.~~
~~FIG. 2 is an example of a flugelhorn.~~
~~FIG. 3 is an example of a Harmon Mute used for trumpet.~~
~~FIG. 4 is an example of a Harmon Mute placed inside a B flat trumpet.~~

~~FIG. 5 is an example of a straight mute used for trumpet.~~

~~FIG. 6 is an example of a straight mute placed inside a B flat trumpet.~~

~~FIG. 7 is an example of a cup mute used for trumpet.~~

~~FIG. 8 is an example of a cup mute inside a B flat trumpet.~~

~~FIG. 9 is a digital photograph of the ring mute positioned in a horizontal manner.~~

~~FIG.10 is a digital photograph of the ring mute positioned in an upright manner.~~

~~FIG.11 is a digital photograph of the ring mute exposing the incision area where the rim of the brass musical instrument is placed.~~

~~FIG.12 is a digital photograph of a side view of the ring mute on the rim of the bell of a trumpet.~~

~~FIG.13 is a digital photograph of the ring mute on the rim of the bell of a trumpet looking inside the bell of a trumpet.~~

REPLACEMENT SHEET

(h) DETAILED DESCRIPTION OF THE INVENTION.

The present invention (ring mute) is comprised of a flexible foam urethane ring 1.25 inches wide and .625 inches thick with an incision .25 inches deep extending the entire inner circumference of the invention. A non porous adhesive tape strip 1 inch wide and 9 mils thick encircles the entire outer area of the foam ring which helps protect the ring from damage (See Drawings).

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~~DESCRIPTION OF RELATED ART~~

~~Conventionally, if a brass musician (for example trumpet player) wanted to express a round, smooth, smoky sound from an instrument, generally two avenues were taken: Purchase a vintage trumpet (The Martin Company Committee B-flat Trumpet) which tends to have a smooth, rounded, smoky sound due to materials and design. The famous trumpet player Miles Davis who used the Martin Company Committee B-flat Trumpet would be an excellent example of the smooth, rounded, smoky sound); or use a flugelhorn.~~

~~FIG. 1 Vintage trumpet from around the 1940–1950~~
~~FIG. 2 Flugelhorn~~

~~Although no mute on the market creates the sound of the **ring mute**, several mutes are available to assist the musician with added expressivity. All current mutes are designed to be placed into the bell of the brass musical instrument thus causing more air blow resistance and pitch change. Examples of such mutes are the Harmon mute, the straight mute and the cup mute.~~

~~FIG. 3 Harmon mute~~
~~FIG. 4 Harmon mute with brass instrument~~
~~FIG. 5 Straight mute~~
~~FIG. 6 Straight mute with brass instrument~~
~~FIG. 7 Cup mute~~
~~FIG. 8 Cup mute with brass instrument~~

~~Page Five~~

NOVELTY, UTILITY AND NONOBVIOUSNESS AND VISUAL DESCRIPTION OF THE RING MUTE

NOVELTY

The **ring mute** is novel in that instead of the mute plugging into the instrument by fitting inside the bell of the brass musical instrument, the **ring mute** fits onto and around the rim of the bell of the brass musical instrument. This is an important difference from all previous mutes since research suggests that no mutes to date go onto and around the rim of the bell of a brass musical instrument. Instead, all mutes go inside the bell of the brass musical instrument. This is akin to a male plug (traditional mutes) and a female receptor (the brass musical instrument).

UTILITY

The usefulness of the **ring mute** is found in the sound it produces. The unique sound (timbre) is altered to a smooth, more rounded, smoky expression musically with no apparent change in air blow resistance or pitch. The **ring mute** gives the brass musician a new and different choice among the choices of mutes used for musical expressivity.

NONOBVIOUSNESS

The **ring mute** is both a surprising and significant development for individuals who use mutes with brass musical instruments in both the effect it achieves and how it is used. Mutes are used in brass musical instruments to add variety to the expression of the music and reduce the loudness of a brass musical instrument.

The **ring mute** adds a smooth, rounded, smoky effect to the music by reducing the sharpness of the sound (timbre), thus giving the auditory effect of a reduction in sound. This is a significant difference from the sound of all other mutes that fit into the bell of the brass musical instrument.

VISUAL DESCRIPTION

The **ring mute** is used by placing the ring onto and around the rim of the bell of the brass musical instrument. This results in no apparent air blow resistance for the musician. To date no other mutes work in this fashion or have quite this effect.

FIG. 9 **Ring mute** with ruler
FIG. 10 **Ring mute** with ruler
FIG. 11 **Ring mute** incision area
FIG. 12 **Ring mute** with trumpet
FIG. 13 **Ring mute** with trumpet

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(k) SEQUENCE LISTING.

Not applicable

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None

APPENDIX ONE:

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

FIGURE ONE
RING MUTE FROM VARIOUS ANGLES

A) Horizontal View of the Mute

1. Opening
2. Flexible Foam Urethane Ring .625 Inches Thick
3. 1 Inch Wide Adhesive Tape Strip 9 Mils Thick, Attached to the Outer Section of the 1.25 Inch Wide Urethane Foam Ring
4. Inner Area of the Ring Mute Showing the .25 Inch Deep Incision

B) Front View of Mute

1. Opening
2. Flexible Foam Urethane Ring .625 Inches Thick
3. 1 Inch Wide Adhesive Tape Strip 9 Mils Thick, Attached to the Outer Section of the 1.25 Inch Wide Urethane Foam Ring
4. Inner Area of the Ring Mute Showing the .25 Inch Deep Incision

C) Vertical View of the Mute

1. Opening
2. Flexible Foam Urethane Ring .625 Inches Thick
3. 1 Inch Wide Adhesive Tape Strip 9 Mils Thick, Attached to the Outer Section of the 1.25 Inch Wide Urethane Foam Ring
4. Inner Area of the Ring Mute Showing the .25 Inch Deep Incision

FIGURE TWO

Horizontal View of the Mute

1. Opening
2. Flexible Foam Urethane Ring .625 Inches Thick
3. 1 Inch Wide Adhesive Tape Strip 9 Mils Thick, Attached to the Outer Section of the 1.25 Inch Wide Urethane Foam Ring
4. Inner Area of the Ring Mute Showing the .25 Inch Deep Incision

FIGURE THREE

Front View of Mute

1. Opening
2. Flexible Foam Urethane Ring .625 Inches Thick
3. 1 Inch Wide Adhesive Tape Strip 9 Mils Thick, Attached to the Outer Section of the 1.25 Inch Wide Urethane Foam Ring
4. Inner Area of the Ring Mute Showing the .25 Inch Deep Incision

FIGURE FOUR

Vertical View of the Mute

1. Opening
2. Flexible Foam Urethane Ring .625 Inches Thick
3. 1 Inch Wide Adhesive Tape Strip 9 Mils Thick, Attached to the Outer Section of the 1.25 Inch Wide Urethane Foam Ring
4. Inner Area of the Ring Mute Showing the .25 Inch Deep Incision